ELSEVIER

Aquaculture 139 (1996) 337–339

Aquaculture

Contents of *Aquaculture*, Volume 139

VOL. 139 NOS. 1–2 **1 JANUARY 1996**

Husbandry and Management

Social interactions and the distribution of food among one-sea-winter Atlantic salmon (*Salmo salar*) in a sea-cage
S. Kadri, F.A. Huntingford, N.B. Metcalfe and J.E. Thorpe (Glasgow, UK) 1

Modelling thermal environment of a recirculating aquaculture facility
S. Singh and L.S. Marsh (Blacksburg, VA, USA) 11

Nursery production technology for Pacific threadfin (*Polydactylus sexfilis*)
A.C. Ostrowski (Waimanalo, HI, USA), T. Iwai (Honolulu, HI, USA), S. Monahan (Waimanalo, HI, USA), S. Unger (Honolulu, HI, USA), D. Dagdagan (Waimanalo, HI, USA), P. Murakawa (Honolulu, HI, USA), A. Schivell (Waimanalo, HI, USA) and C. Pigao (Honolulu, HI, USA) 19

Sex differentiation and hormonal feminization in pejerrey *Odontesthes bonariensis*
C.A. Strüssmann, F. Takashima (Tokyo, Japan) and K. Toda (Kanagawa, Japan) 31

The critical importance of sample site in the determination of the frequency of oxytetracycline resistance in the effluent microflora of a fresh water fish farm
S. Vaughan, R. Coyne and P. Smith (Galway, Ireland) 47

Ammonia removal from aquaculture water by means of fluidised technology
W.J. Ng, K. Kho, S.L. Ong, T.S. Sim and J.M. Ho (Singapore, Singapore) 55

Nutrition

The importance of broodstock nutrition on the viability of larvae and spat in the Chilean oyster *Ostrea chilensis*
J.A. Wilson, O.R. Chaparro (Valdivia, Chile) and R.J. Thompson (St. John's, Nfld., Canada) 63

Comparative studies on the nutrition of two species of abalone, *Haliotis tuberculata* L. and *Haliotis discus hannai* Ino. V. The role of polyunsaturated fatty acids of macroalgae in abalone nutrition
K. Mai, J.P. Mercer and J. Donlon (Galway, Ireland) 77

Growth response of juvenile dentex (*Dentex dentex* L.) to varying protein level and protein to lipid ratio in practical diets
E. Tibaldi, P. Beraldo, L.A. Volpelli and M. Pinosa (Pagnacco UD, Italy) 91

Growth, body composition and nutrient retention efficiency of growing sea bass (*Dicentrarchus labrax* L.) fed fish oil or fatty acid Ca salts
R. Ballestrazzi and D. Lanari (Udine, Italy) 101

Enterocytes in the anterior intestine of *Oncorhynchus mykiss*: Cytological characteristics related to osmoregulation
M.A. Abaurrea-Equisoaín and M.V. Ostos-Garrido (Granada, Spain) 109

Diel feeding activity and the effect of time-restricted self-feeding on growth and feed conversion in European sea bass
T. Boujard, M. Jourdan (Saint-Pée-Sur-Nivelle, France), M. Kentouri and P. Divanach (Crete, Greece) 117

Elsevier Science B.V.

Sea bass (*Dicentrarchus labrax*) larvae fed different *Artemia* rations: growth, pancreas enzymatic response and development of digestive functions
J.L. Zambonino Infante, C.L. Cahu, A. Péres, P. Quazuguel and M.M. Le Gall (Plouzané, France) 129

Physiology and Endocrinology
Biochemical composition of eggs from repeat and first-time spawning captive Atlantic halibut (*Hippoglossus hippoglossus*)
R.P. Evans, C.C. Parrish, J.A. Brown and P.J. Davis (St. John's, Nfld., Canada) 139

Short Communication
Culture of coquina clam, *Donax trunculus*, larvae
P. Ruiz-Azcona, R. Rodríguez-Sierra and J.B. Martín (Huelva, Spain) 151

Technical Paper
A simple method for the measurement of daily feed intake of groups of fish in tanks
S.J. Helland, B. Grisdale-Helland and S. Nerland (Sunndalsøra, Norway) 157

Book Reviews
Aquatic animals 165
Fish and fishery products 166
Cold water aquaculture 167
Water reuse systems 169

Guide for Authors 171

VOL. 139 NOS. 3-4 15 JANUARY 1996

Review
The potential for integrated biological treatment systems in recirculating fish culture—A review
J.v. Rijn (Rehovot, Israel) 181

Genetics and Breeding
Allozyme heterozygosity, founder effect and fitness traits in a cultivated population of the European oyster, *Ostrea edulis*
C. Saavedra (Santiago de Compostela A Coruña, Spain) and A. Guerra (Vilagarci a da Arousa Pontevedra, Spain) 203
Limitations in the genetic variation of hatchery produced batches of the giant clam, *Tridacna gigas*
J.A.H. Benzie and S.T. Williams (Townsville, M.C. Qld., Australia) 225

Husbandry and Management
Evaluation of a fluorescent elastomer internal tag in juvenile and adult shrimp *Penaeus vannamei*
D.M. Godin, W.H. Carr, G. Hagino, F. Segura, J.N. Sweeney (Waimanalo, HI, USA) and L. Blankenship (Washington, USA) 243
Repeat sexual maturation of wolffish (*Anarhichas lupus* L.) broodstock
D.A. Pavlov (Moscow, Russia) and E. Moksness (His, Norway) 249
Optimization of certain physical parameters for the mariculture of *Gracilaria edulis* (Gmelin) Silva in Minicoy lagoon (Laccadive Archipelago)
P. Kaladharan, K. Vijayakumaran and V.S.K. Chennubhotla (Minicoy, India) 265
Tagging sea urchins: a new technique for individual identification
N.T. Hagen (Bodø, Norway) 271

Physiology and Endocrinology

Dietary riboflavin requirement of fingerling channel catfish (*Ictalurus punctatus*)
G. Serrini, Z. Zhang and R.P. Wilson (Mississippi State, MS, USA) 285

Changes in fertilization and hatching rates with time after ovulation induced by 17, 20β-dihydroxy-4-pregnen-3-one in the Japanese eel, *Anguilla japonica*
H. Ohta, H. Kagawa, H. Tanaka, K. Okuzawa (Nansei, Mie, Japan) and K. Hirose (Yokohama, Kanagawa, Japan) 291

Nutrition

Determination of digestibility coefficients of various feedstuffs for red drum (*Sciaenops ocellatus*)
T. Gibson Gaylord and D.M. Gatlin III (College Station, TX, USA) 303

In vitro carbohydrate digestibility tests in the Indian white shrimp, *Penaeus indicus*
J.G. Omondi and J.R. Stark (Edinburgh, UK) 315

Technical Paper

Improved method of determining the sex of the marine topshell, *Trochus niloticus* (Mollusca: Gastropoda) for spawning
G. Dobson and C.L. Lee (Darwin N.T., Australia) 329

Book Review

Recent Advances in Aquaculture V 333

Nutrition

Determination of digestibility coefficients of various feedstuffs for red drum (*Sciaenops ocellatus*)
T.G. Gaylord and D.M. Gatlin III (College Station, TX, USA) 303

In vitro carbohydrate digestibility tests in the Indian white shrimp, *Penaeus indicus*
J.G. Omondi and J.R. Stark (Edinburgh, UK) 315

Technical Paper

Improved method of determining the sex of the marine topshell, *Trochus niloticus* (Mollusca: Gastropoda) for spawning
G. Dobson and C.L. Lee (Darwin N.T., Australia) 329

Book Review

Recent Advances in Aquaculture V 333

Contents of *Aquaculture*, Volume 139 337